

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: JUL 21 1995

RECEIVED

John Witkowski

SUBJECT: Potential Action at Cornell-Dubilier Site, S. Plainfield, NJ

FROM: Richard Spear, Chief
Surveillance and Monitoring Branch

USEPA
REMOVAL AND EMERGENCY
PREPAREDNESS PROGRAMS

TO: Richard Salkie, Associate Director
Removal and Emergency Preparedness Program

It has come to our attention, as a result of a site inspection performed by Malcolm Pirnie Inc., that a potentially hazardous environmental condition may exist at the former Cornell-Dubilier Site in downtown South Plainfield, NJ. High levels of PCB Arochlor-1254 are found in soils at the site (up to 1,100 ppm) and in the nearby unnamed tributary to Bound Brook (up to 550 ppm of Arochlor-1254). Elevated levels of cadmium (36.7 ppm), chromium (78.6 ppm), lead (2,200 ppm), mercury (2.9 ppm) and silver (26.7 ppm) are also found in the soils at the site.

The site is not fenced and there are several homes within 200 feet of the site boundary. It is estimated that between 10 and 100 workers are employed at the Hamilton Industrial Park (the site's current name). Sampling results indicate that more than 0.1 miles of wetlands have been actually contaminated with Level II concentrations of PCBs.

Please review this information to determine if any stabilization or removal actions are necessary. A copy of the site screening letter prepared as part of the Hazardous Ranking System Package is attached to provide more detailed information.

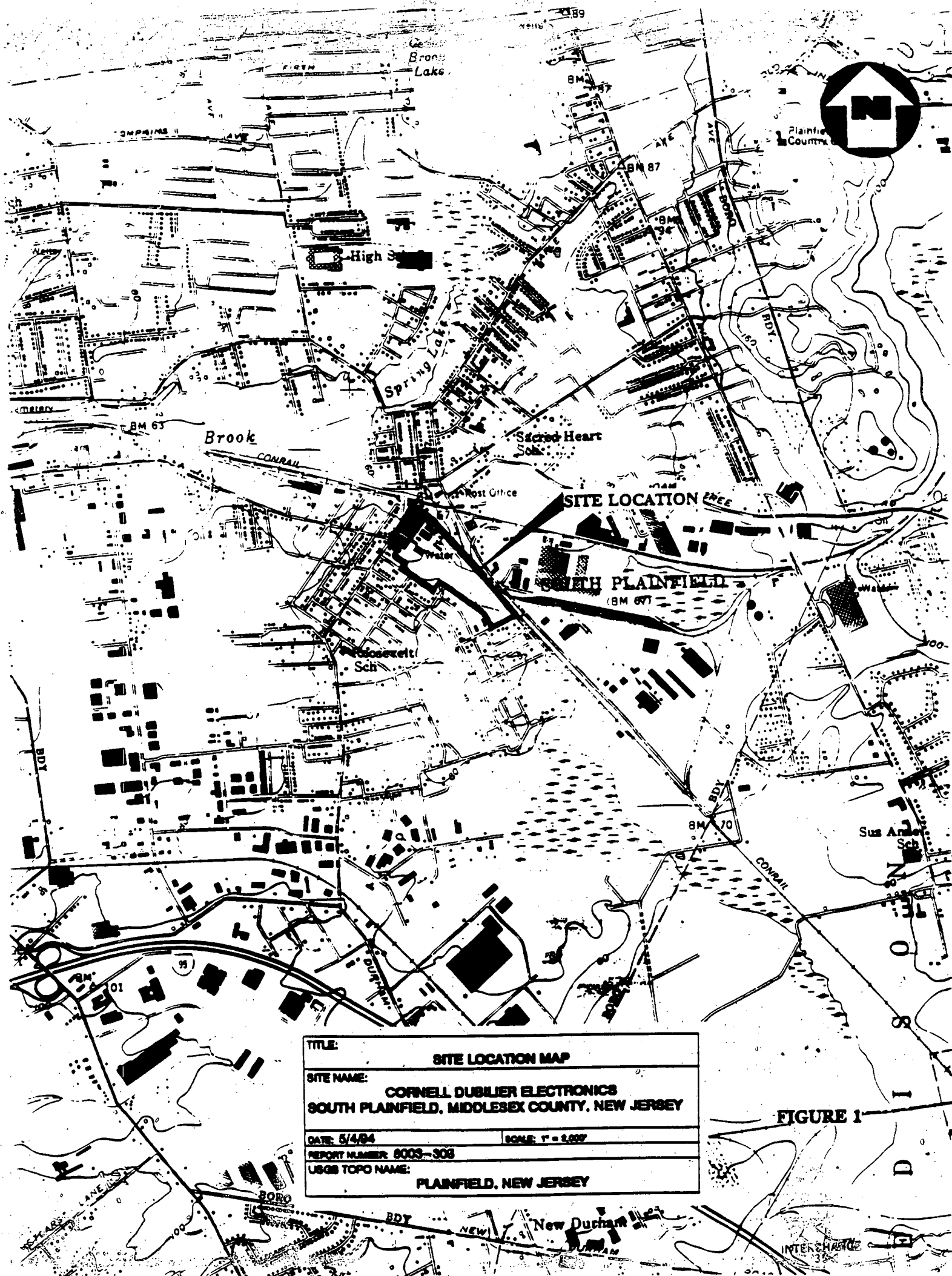
Attachment

CC: D. Santella (2ERRD-PSB)

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ATTACHMENT 1
CORNELL DUBILIER ELECTRONICS, INC.
FIGURES AND TABLES



TITLE:	
SITE LOCATION MAP	
SITE NAME:	
CORNELL DUBLIER ELECTRONICS	
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY	
DATE: 5/4/84	SCALE: 1" = 2,000'
REPORT NUMBER: 6003-308	
USGS TOPO NAME:	
PLAINFIELD, NEW JERSEY	

FIGURE 1

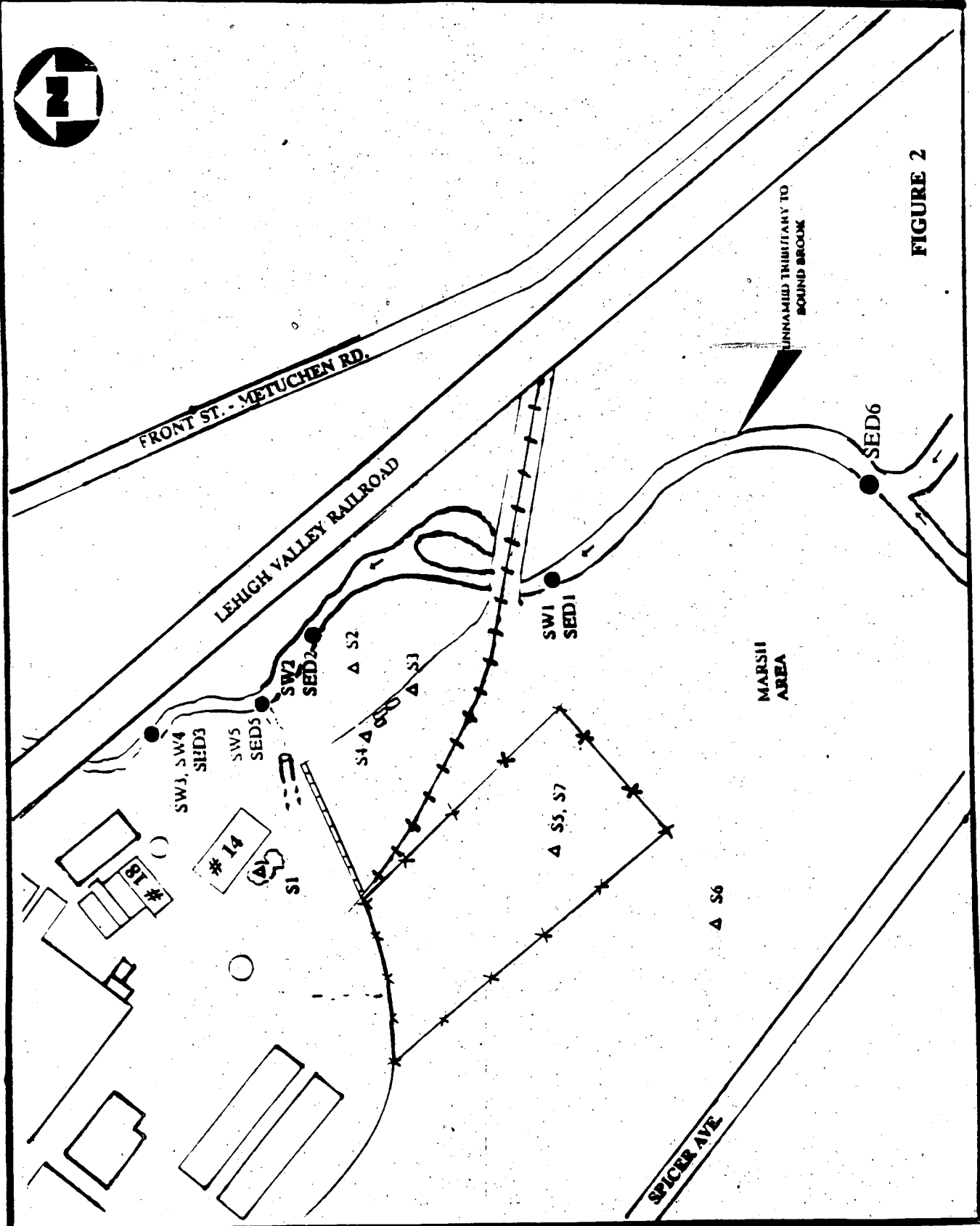


FIGURE 2

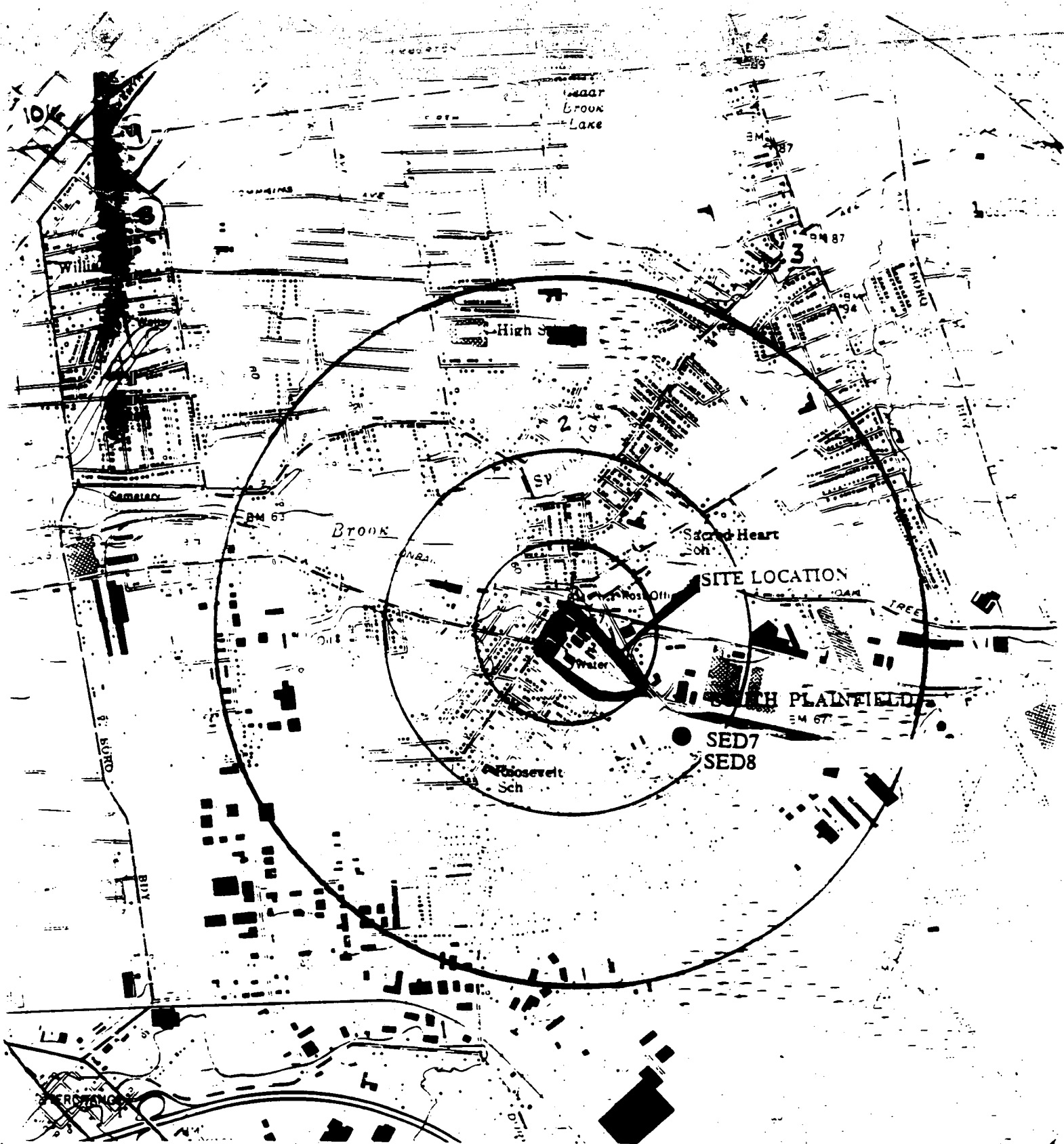
CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE

MAP KEY

SOIL SAMPLE

SURFACE WATER/SEDIMENT SAMPLE





CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
OFF-SITE SAMPLE LOCATION MAP
SCALE: 1" = 2,000 FT.

FIGURE 3

TABLE 1
Analytical Data⁽¹⁾
Cornell Dubilier Site Inspection Prioritization Sampling Event - June 8, 1994

Hazardous Substance	Media	Background Sample Location	Background Sample Concentration- µg/kg ⁽²⁾	Contaminated Sample Location	Contaminated Sample Concentration µg/kg
arsenic	SOIL	S6	3,200	S1	16,700
				S2	15,200
				S3	25,700
				S4	12,900
cadmium	SOIL	S6	ND ⁽³⁾	S4	4,700
				S5	33,200
				S7	36,700
chromium	SOIL	S6	11,900	S4	78,600
lead	SOIL	S6	43,200	S1	178,000
				S2	348,000
				S3	198,000
				S4	419,000
				S5	2,200,000
				S7	1,990,000
mercury	SOIL	S6	ND	S1	2,400
				S2	980
				S3	240
				S4	2,900
				S5	470
				S7	760
PCBs	SOIL	S6	8,200	S1	68,000
				S2	110,000
				S5	1,100,000
				S7	1,100,000
silver	SOIL	S6	1,100 J ⁽⁴⁾	S2	6,800
				S5	26,700
				S7	22,900
PCBs (Aroclor-1254)	SEDIMENT	SED6 ⁽⁵⁾	520 E	SED1	550,000
		SED7 ⁽⁵⁾	250 E	SED2	3,700
		SED8 ⁽⁵⁾	310	SED3	4,500
				SED5	51,000

NOTES

- 1 All data has been analyzed and validated utilizing USEPA Contract Laboratory Program Protocols.
- 2 µg/kg = micrograms per kilogram
- 3 ND = Not Detected
- 4 J = estimated value, compound present below CRQL but above IDL
- 5 Background sediment samples were collected during a separate sampling event on October 13, 1994.

ATTACHMENT 2
CORNELL DUBILIER ELECTRONICS, INC.
PROJECT NOTES

To:File	Date:June 6, 1995
From:Andrew Clibanoff	Project #:8003-454
Subject:Waste Source Calculations	Site Name:Corneil Dubilier Electronics, Inc.

One waste source has been identified at the Corneil Dubilier Electronics, Inc (CDEI) site.

Waste Source 1 (Contaminated Soil): CDEI tested transformer oils at the site for an unknown period of time until the company vacated the site in 1961. It was alleged during CDEI's period of operation that the company dumped transformer oil contaminated with polychlorinated biphenyls (PCBs) directly onto site soils. Former employees have reportedly claimed that transformers were buried behind the facility during the same time period. Surficial soil samples were collected from six locations during a June 1994 USEPA sampling event. Analyses of the soil samples detected the following CERCLA hazardous substances at concentrations greater than three times background levels: arsenic (25.7 mg/kg), cadmium (36.7 mg/kg), chromium (78.6 mg/kg), lead (2,200 mg/kg), mercury (2.9 mg/kg), PCBs (Aroclor-1254 @ 1,100,000 µg/kg), and silver (26.7 mg/kg). An area of > 0 square feet is assigned to this waste source.

To:File	Date:June 20, 1995
From:Andrew Cilbanoff	Project #:8003-454
Subject:Groundwater Apportionment	Site Name:Corneil Dubilier Electronics

There are two public water suppliers that draw water from wells located within four miles of the Corneil Dubilier Electronics Site: Middlesex Water Company and Elizabethtown Water Company.

Middlesex Water Company

Middlesex Water Company (MWC) utilizes 32 wells in conjunction with a surface water intake and water purchased from the Elizabethtown Water Company to supply potable water to approximately 52,000 service connections in the communities of South Plainfield, Metuchen, Carteret, Woodbridge, Edison and portions of Clark. A total population of 140,920 (52,000 service connections x 2.71 people/household in Middlesex County) receives its drinking water from Middlesex Water Company. Water is also provided via bulk transmission lines to the communities of Edison Township, Highland Park, Old Bridge MUA, Marlboro Township MUA and Sayreville. Although the system is interconnected in such a way that it is possible for water from any water supply unit to reach the bulk transmission lines, practically all of the water shipped in the bulk transmission lines originates from the surface water intake. The surface water intake accounts for 63.2% of the total system flow for MWC, wells account for 31.4%, and 5.4% is purchased from the Elizabethtown Water Company.

Apportionment Calculation

1 Wellfield Name	2 No. of wells	3 % of total system flow (1994)	4 <u>Population</u> Wellfield (Column 3 * 140,920)
Park Avenue	15	18.5	26,070
Spring Lake	4	2.9	4,087
Maple Avenue	2	1.8	2,537
Sprague Ave. Nos. 1 & 2	2	2.8	3,946
Tingley Lane North & South	<u>9</u>	<u>5.4</u>	<u>7,610</u>
	32	31.4%	44,250

The Sprague Avenue wells and six of the fifteen Park Avenue wells are drawing water from the stratified drift. All of the other wells owned by Middlesex Water Company tap the Brunswick Aquifer. The Spring Lake Wellfield is in the 0.5 to 1 mile ring. The Park Avenue, Maple Avenue, and Sprague Avenue Wellfields are located in the 1-2 mile ring. The Tingley Lane Wellfield is located in the 2-3 mile ring.

Stratified Drift - - - -

Population served in 1-2 mile ring = (Park and Sprague Ave. Wells) = (10,428 + 3,946) = 14,374

Brunswick Aquifer

Population served in 1/4-1 mile ring = Spring Lake Wells = 4,087

Population served in 1-2 mile ring = (Park and Maple Ave. Wells) = (15,642 + 2,537) = 18,179

Population served in 2-3 mile ring = Tingley Lane Wellfield = 7,610

To:File	Date:June 6, 1995
From:Andrew Cilbanoff	Project #:8003-454
Subject:Groundwater Apportionment	Site Name:Corneil Dubilier Electronics

Elizabethtown Water Company (EWC)

Many communities within four miles of the site obtain their potable water from the Elizabethtown Water Company (EWC). EWC supplies drinking water to the communities of Somerville, Bridgewater Township, Warren Township, Green Brook, Dunellen, Middlesex Borough, Bound Brook, South Bound Brook, Piscataway and portions of Franklin Township.

The EWC distribution system currently blends water from five surface water intakes with water from 76 operating wells to provide water to 183,853 service connections. A total population of 498,241 (183,853 service connections x 2.71 people/household in Middlesex County) receives its drinking water from Elizabethtown Water Company. Surface water makes up roughly 85% of the total system flow with one of the intakes on the Raritan River providing more than 40% of the total system flow. The distribution system is completely interconnected and all of the wells within four miles of the site tap the Brunswick Formation. The population served by groundwater within four miles of the site was estimated based on pumpage capacity. There are 21 operating EWC wells within four miles of the Cornell Dubilier Site. Two EWC operating wells (serving 2,571 people) are located within the 1-2 mile ring, four wells (serving 3,196 people) are located in the 2-3 mile ring and 15 wells (serving 14,063 people) are located within the 3-4 mile ring.

Summary of Apportionment Calculations

<u>Ring</u> (mi)	Stratified Drift		<u>Total</u> <u>Population</u>
	<u>Middlesex</u> <u>Water Co.</u>	<u>Elizabethtown</u> <u>Water Company</u>	
0 - 0.25	0	0	0
0.25 - 0.5	0	0	0
0.5 - 1	0	0	0
1 - 2	14,374	0	14,374
2 - 3	0	0	0
3 - 4	<u>0</u>	<u>0</u>	<u>0</u>
Total:	14,374	0	14,374

<u>Ring</u> (mi)	Brunswick Aquifer		<u>Total</u> <u>Population</u>
	<u>Middlesex</u> <u>Water Co.</u>	<u>Elizabethtown</u> <u>Water Company</u>	
0 - 0.25	0	0	0
0.25 - 0.5	0	0	0
0.5 - 1	4,087	0	4,087
1 - 2	18,179	2,571	20,750
2 - 3	7,610	3,196	10,806
3 - 4	<u>0</u>	<u>14,063</u>	<u>14,063</u>
Total:	29,876	19,830	49,706

**Elizabethtown Water Company
Active Well List - June 15, 1995**

	Municipality	Facility Name	Well Depth (feet)	Formation	Pump Cap. (gpm)	% Total System Flow	Population Per Well
1	Bound Brook	Mountain Sta. #1	366'	Brunswick	375	0.21%	1,042
2	Bound Brook	Mountain Sta. #1	403'	Brunswick	350	0.20%	973
3	Bound Brook	Mountain Sta. #3	352'	Brunswick	—	0.00%	0
4	Bridgewater	Papen Road	225'	Basalt	310	0.17%	862
5	Bridgewater	Wells Road #3	230'	Basalt	45	0.03%	125
6	Bridgewater	Wells Road #2	230'	Basalt	40	0.02%	111
7	Cranbury	Cranbury Well #1A	260'	Farrington	300	0.17%	834
8	Cranbury	Cranbury Well #2	110'	Old Bridge	—	0.00%	0
9	Cranbury	Cranbury Well #3	298'	Farrington	400	0.22%	1,112
10	GREEN BROOK	GREEN BROOK #1	451'	BRUNSWICK	310	0.17%	862
11	GREEN BROOK	GREEN BROOK #2	376'	BRUNSWICK	650	0.36%	1,807
12	GREEN BROOK	GREEN BROOK #3	550'	BRUNSWICK	60	0.03%	167
13	GREEN BROOK	GREEN BROOK #4	400'	BRUNSWICK	350	0.20%	973
14	GREEN BROOK	GREEN BROOK #5	454'	BRUNSWICK	315	0.18%	875
15	GREEN BROOK	GREEN BROOK #6	373'	BRUNSWICK	280	0.16%	778
16	GREEN BROOK	GREEN BROOK #7	545'	BRUNSWICK	180	0.10%	500
17	GREEN BROOK	GREEN BROOK #8	445'	BRUNSWICK	500	0.28%	1,390
18	GREEN BROOK	GREEN BROOK #9	507'	BRUNSWICK	500	0.28%	1,390
19	GREEN BROOK	GREEN BROOK #11	433'	BRUNSWICK	340	0.19%	945
20	GREEN BROOK	ROCK AVENUE	350'	BRUNSWICK	330	0.18%	917
21	Kenilworth	Quinton Avenue	502'	Brunswick	185	0.10%	514
22	Montgomery	Montgomery #1	305'	Stockton	400	0.22%	1,112
23	Montgomery	Montgomery #2	335'	Stockton	300	0.17%	834
24	Mountainside	Bristol Road	315'	Brunswick	330	0.18%	917
25	Mountainside	Charles Street #1	454'	Brunswick	300	0.17%	834
26	Mountainside	Charles Street #2	572'	Brunswick	150	0.08%	417
27	N. PLAINFIELD	BOARD OF EDUCATION	311'	BRUNSWICK	400	0.22%	1,112
28	PISCATAWAY	ROCK AVENUE	350'	BRUNSWICK	150	0.08%	417
29	PLAINFIELD	FIFTH STREET	350'	BRUNSWICK	300	0.17%	834
30	Plainfield	George Street	350'	Brunswick	125	0.07%	347
31	PLAINFIELD	NETHERWOOD #1	350'	BRUNSWICK	220	0.12%	611
32	PLAINFIELD	NETHERWOOD #2	500'	BRUNSWICK	225	0.13%	625
33	PLAINFIELD	NETHERWOOD #3	350'	BRUNSWICK	600	0.33%	1,668
34	Plainfield	Netherwood #4	400'	Brunswick	300	0.17%	834
35	Plainfield	Netherwood #5	350'	Brunswick	300	0.17%	834
36	Plainfield	Netherwood #6	300'	Brunswick	325	0.18%	903
37	Plainfield	Netherwood #7	350'	Brunswick	350	0.20%	973
38	Plainfield	Netherwood #8	304'	Brunswick	300	0.17%	834
39	Plainfield	Netherwood #9	350'	Brunswick	300	0.17%	834
40	Plainfield	Netherwood #10	350'	Brunswick	300	0.17%	834
41	Plainfield	Netherwood #11	350'	Brunswick	250	0.14%	695
42	Plainfield	Netherwood #12	352'	Brunswick	400	0.22%	1,112
43	PLAINFIELD	PROSPECT AVENUE	350'	BRUNSWICK	300	0.17%	834
44	Plainsboro	Plainsboro #1	120'	Raritan	350	0.20%	973
45	Plainsboro	Plainsboro #2	208'	Raritan	295	0.16%	820
46	Princeton	Harrison Street #1	503'	Stockton	100	0.06%	278
47	Princeton	Harrison Street #4	302'	Stockton	150	0.08%	417

**Cornell Dubilier Electronics, Inc.
 Elizabethtown Water Company Wells
 Located Within Four Miles of the Site**

Facility Name	Formation	Distance Category (miles)	Pumpage Capacity (gpm)	% Total System Flow	Population Per Well
CLINTON AVENUE	BRUNSWICK	1 - 2	475	0.26%	1,320
EIGHTH STREET	BRUNSWICK	1 - 2	450	0.25%	1,251
BOARD OF EDUCATION	BRUNSWICK	2 - 3	400	0.22%	1,112
ROCK AVENUE	BRUNSWICK	2 - 3	150	0.08%	417
FIFTH STREET	BRUNSWICK	2 - 3	300	0.17%	834
PROSPECT AVENUE	BRUNSWICK	2 - 3	300	0.17%	834
GREEN BROOK #1	BRUNSWICK	3 - 4	310	0.17%	862
GREEN BROOK #2	BRUNSWICK	3 - 4	650	0.36%	1,807
GREEN BROOK #3	BRUNSWICK	3 - 4	60	0.03%	167
GREEN BROOK #4	BRUNSWICK	3 - 4	350	0.20%	973
GREEN BROOK #5	BRUNSWICK	3 - 4	315	0.18%	875
GREEN BROOK #6	BRUNSWICK	3 - 4	280	0.16%	778
GREEN BROOK #7	BRUNSWICK	3 - 4	180	0.10%	500
GREEN BROOK #8	BRUNSWICK	3 - 4	500	0.28%	1,390
GREEN BROOK #9	BRUNSWICK	3 - 4	500	0.28%	1,390
GREEN BROOK #11	BRUNSWICK	3 - 4	340	0.19%	945
ROCK AVENUE	BRUNSWICK	3 - 4	330	0.18%	917
NETHERWOOD #1	BRUNSWICK	3 - 4	220	0.12%	611
NETHERWOOD #2	BRUNSWICK	3 - 4	225	0.13%	625
NETHERWOOD #3	BRUNSWICK	3 - 4	600	0.33%	1,668
ABERDEEN ROAD	BRUNSWICK	3 - 4	200	0.11%	556

Total Population (1 - 2 Mile Ring): 2,571
Total Population (2 - 3 Mile Ring): 3,196
Total Population (3 - 4 Mile Ring): 14,063

**Elizabethtown Water Company
Active Well List - June 15, 1995**

Municipality	Facility Name	Well Depth (feet)	Formation	Pump Cap. (gpm)	% Total System Flow	Population Per Well
48 Princeton	Harrison Street #5	300'	Stockton	240	0.13%	667
49 Princeton	Harrison Street #6	335'	Stockton	390	0.22%	1,084
50 Princeton	Harrison Street #7	300'	Stockton	65	0.04%	181
51 Princeton	Stony Brook #2	300'	Stockton	300	0.17%	834
52 Princeton	Stony Brook #3	353'	Stockton	400	0.22%	1,112
53 Princeton	Stony Brook #4	382'	Stockton	300	0.17%	834
54 Princeton	Stony Brook #6	304'	Stockton	450	0.25%	1,251
55 Princeton	Stony Brook #7A	350'	Stockton	600	0.33%	1,668
56 Princeton	Stony Brook #8	302'	Stockton	600	0.33%	1,668
57 Raritan Township	Maple Glen	355'	Brunswick	250	0.14%	695
58 SCOTCH PLAINS	ABERDEEN ROAD	350'	BRUNSWICK	200	0.11%	556
59 Scotch Plains	Glenside Avenue	540'	Brunswick	200	0.11%	556
60 Scotch Plains	Jerusalem Road #1	650'	Brunswick	275	0.15%	764
61 Scotch Plains	Jerusalem Road #2	665'	Brunswick	350	0.20%	973
62 Scotch Plains	Jerusalem Road #3	708'	Brunswick	150	0.08%	417
63 SOUTH PLAINFIELD	CLINTON AVENUE	350'	BRUNSWICK	475	0.26%	1,320
64 SOUTH PLAINFIELD	EIGHTH STREET	350'	BRUNSWICK	450	0.25%	1,251
65 Tewksbury	Pottersville	300'	Pre-Cambrian	100	0.06%	278
66 Union	Hummocks #4A	117.5'	Brunswick	70	0.04%	195
67 Union	Hummocks #5A	128'	Brunswick	100	0.06%	278
68 Union	Hummocks #6AR	130'	Brunswick	300	0.17%	834
69 Union	Hummocks #7A	233'	Brunswick	85	0.05%	236
70 Union	Hummocks #8A	114'	Brunswick	200	0.11%	556
71 Union	Hummocks #17	99.5'	Brunswick	250	0.14%	695
72 Union	Hummocks #12	110'	Brunswick	150	0.08%	417
73 Union	Ranney Well Pump #1	99'	Brunswick	2,500	1.39%	6,948
74 Union	Ranney Well Pump #2	99'	Brunswick	2,500	1.39%	6,948
75 West Windsor	Jefferson Park #1	121'	Raritan	600	0.33%	1,668
76 West Windsor	Jefferson Park #2	126'	Raritan	600	0.33%	1,668

Total Pumpage Capacity: 26,490 14.78% 73,624

Total Intake Capacity: 152,778

Total System Capacity: 179,268

Total Service Connections (Elizabethtown Water Company): 183,853

Population/Household (Middlesex County): 2.71

Total Population Served: 498,242

Notes:

1. Wells within four miles of the Cornell Dubilier Electronics, Inc. Site shown in bold and caps.
2. % Total System Flow = (Pumpage Capacity / Total System Capacity) x 100.
3. Population Per Well = (% Total System Flow x Total Population Served) / 100